

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-25 (Canceled).

26. (Currently Amended) A semiconductor device comprising:

a substrate having an insulating surface;

a thin film transistor formed over the substrate, the thin film transistor comprising:

a gate electrode formed over the substrate, the gate electrode comprising aluminum;

a first insulating layer, wherein a first portion of said first insulating layer is formed over said gate electrode;

a channel formation region formed in a first semiconductor layer;

source and drain regions, each of the source and drain regions comprising a second semiconductor layer including impurities, formed over the first semiconductor layer;

a second insulating layer comprising an inorganic material and formed over the first semiconductor layer and the second semiconductor layer containing the impurities so as to be in contact with at least a part of the channel formation region;

a pixel electrode over the first insulating layer, the pixel electrode comprising indium, zinc and oxygen;

a source wiring formed over the source region;

a drain wiring formed over the drain region and overlapping with a first portion of the pixel electrode;

a storage capacitor comprising a storage capacitor wiring comprising the same material as

that of the gate electrode, a second portion of the first insulating layer over the storage capacitor wiring and a second portion of the pixel electrode; and

an input terminal portion formed along an end portion of the substrate and electrically connected to the source wiring,

wherein the input terminal portion comprises a first layer comprising the same material as the gate electrode and a second layer comprising the same material as the pixel electrode,

wherein the source wiring is electrically connected to the second layer of said input terminal portion,

wherein the storage capacitor wiring is covered by the pixel electrode,

~~wherein a side surface of the second layer of said input terminal portion is coplanar with a side surface of the first insulating layer, and~~

wherein the second insulating layer overlaps with a third portion of the pixel electrode.

27. (Currently Amended) A semiconductor device comprising:

a substrate having an insulating surface;

a thin film transistor formed over the substrate, the thin film transistor comprising:

a gate electrode formed over the substrate, the gate electrode comprising aluminum;

a first insulating layer, wherein a first portion of said first insulating layer is formed over said gate electrode;

a channel formation region formed in a first semiconductor layer;

source and drain regions, each of the source and drain regions comprising a second semiconductor layer including impurities, formed over the first semiconductor layer;

a second insulating layer comprising an inorganic material and formed over the first

semiconductor layer and the second semiconductor layer containing the impurities so as to be in contact with at least a part of the channel formation region;

a pixel electrode formed in contact with the first insulating layer, the pixel electrode comprising indium, zinc and oxygen;

a storage capacitor comprising a storage capacitor wiring comprising the same material as that of the gate electrode, a second portion of the first insulating layer over the storage capacitor wiring and a portion of the pixel electrode; and

an input terminal portion formed along an end portion of the substrate and electrically connected to a first wiring[[:]],

wherein the input terminal portion comprises a first layer comprising the same material as the gate electrode and a second layer comprising the same material as the pixel electrode in contact with the first layer through a contact hole formed only in the first insulating layer,

wherein a portion of the first wiring is formed over the second layer of said input terminal portion, and

wherein the storage capacitor wiring is covered by the pixel electrode, ~~and~~

~~wherein a side surface of the second layer of said input terminal portion is coplanar with a side surface of the first insulating layer.~~

28. (Currently Amended) A semiconductor device comprising:

a substrate having an insulating surface;

a thin film transistor formed over the substrate, the thin film transistor comprising:

a gate electrode formed over the substrate, the gate electrode comprising aluminum;

a first insulating layer, wherein a first portion of said first insulating layer is formed

over said gate electrode;

a channel formation region formed in a first semiconductor layer;

source and drain regions, each of the source and drain regions comprising a second semiconductor layer including impurities of first conductivity type, formed over the first semiconductor layer;

a pixel electrode over the first insulating layer, the pixel electrode comprising indium, zinc and oxygen;

a second insulating layer comprising an inorganic material and overlapping with a first portion of the pixel electrode, the first semiconductor layer and the second semiconductor layer containing the impurities of first conductivity type so as to be in contact with at least a part of the channel formation region;

a storage capacitor comprising a storage capacitor wiring comprising the same material as that of the gate electrode, a second portion of the first insulating layer over the storage capacitor wiring and a second portion of the pixel electrode; and

an input terminal portion formed along an end portion of the substrate and electrically connected to a first wiring[[]],

wherein the input terminal portion comprises a first layer comprising the same material as the gate electrode[[]] and a second layer comprising the same material as the pixel electrode, and

wherein the first wiring is electrically connected to the second layer of said input terminal portion,

wherein each of the gate electrode, the storage capacitor wiring and the first layer has a tapered portion, and

wherein the storage capacitor wiring is covered by the pixel electrode, ~~and~~

~~wherein a side surface of the second layer of said input terminal portion is coplanar with a side surface of the first insulating layer.~~

29. (Canceled)

30. (Currently Amended) A semiconductor device comprising:

a substrate having an insulating surface;

a thin film transistor formed over the substrate, the thin film transistor comprising:

a gate electrode formed over the substrate, the gate electrode comprising aluminum;

a first insulating layer, wherein a first portion of said first insulating layer is formed over said gate electrode;

a channel formation region formed in a first semiconductor layer;

source and drain regions, each of the source and drain regions comprising a second semiconductor layer including impurities, formed over the first semiconductor layer;

a second insulating layer comprising an inorganic material and formed over the first semiconductor layer and the second semiconductor layer containing the impurities so as to be in contact with at least a part of the channel formation region;

a pixel electrode formed in contact with the first insulating layer, the pixel electrode comprising indium, zinc and oxygen;

a storage capacitor comprising a storage capacitor wiring comprising the same material as that of the gate electrode, a second portion of the first insulating layer over the storage capacitor wiring and the pixel electrode; and

an input terminal portion formed along an end portion of the substrate and electrically

connected to a first wiring,

wherein the input terminal portion comprises a first layer comprising the same material as the gate electrode and a second layer comprising the same material as the pixel electrode in contact with the first layer through a contact hole formed only in the first insulating layer,

wherein a portion of the first wiring is formed over the second layer of said input terminal portion,

wherein each of the gate electrode, the storage capacitor wiring and the first layer has a tapered portion, and

wherein the storage capacitor wiring is covered by the pixel electrode, ~~and~~

~~wherein a side surface of the second layer of said input terminal portion is coplanar with a side surface of the first insulating layer.~~

31. (Currently Amended) A semiconductor device comprising:

a substrate having an insulating surface;

a thin film transistor formed over the substrate, the thin film transistor comprising:

a gate electrode formed over the substrate, the gate electrode comprising aluminum;

a first insulating layer, wherein a first portion of said first insulating layer is formed over said gate electrode;

a channel formation region formed in a first semiconductor layer;

source and drain regions, each of the source and drain regions comprising a second semiconductor layer including impurities, formed over the first semiconductor layer;

a second insulating layer comprising an inorganic material and formed over the first semiconductor layer and the second semiconductor layer containing the impurities so as to be in

contact with at least a part of the channel formation region;

a pixel electrode over the first insulating layer, the pixel electrode comprising indium, zinc and oxygen;

a source wiring formed over the source region;

a drain wiring formed over the drain region and overlapping with a first portion of the pixel electrode;

a storage capacitor comprising a storage capacitor wiring comprising the same material as that of the gate electrode, a second portion of the first insulating layer over the storage capacitor wiring and a second portion of the pixel electrode; and

an input terminal portion formed along an end portion of the substrate and electrically connected to the source wiring,

wherein the input terminal portion comprises a first layer comprising the same material as the gate electrode ~~[[,]]~~ and a second layer comprising the same material as the pixel electrode,

wherein the source wiring is electrically connected to the second layer of said input terminal portion,

~~wherein a side surface of the second layer of said input terminal portion is coplanar with a side surface of the first insulating layer, and~~

wherein the second insulating layer overlaps with a third portion of the pixel electrode.

32. (Currently Amended) A semiconductor device comprising:

a substrate having an insulating surface;

a thin film transistor formed over the substrate, the thin film transistor comprising:

a gate electrode formed over the substrate, the gate electrode comprising aluminum;

a first insulating layer, wherein a first portion of said first insulating layer is formed over said gate electrode;

a channel formation region formed in a first semiconductor layer;

source and drain regions, each of the source and drain regions comprising a second semiconductor layer including impurities, formed over the first semiconductor layer;

a second insulating layer comprising an inorganic material and formed over the first semiconductor layer and the second semiconductor layer containing the impurities so as to be in contact with at least a part of the channel formation region;

a pixel electrode formed in contact with the first insulating layer, the pixel electrode comprising indium, zinc and oxygen;

a storage capacitor comprising a storage capacitor wiring comprising the same material as that of the gate electrode, a second portion of the first insulating layer over the storage capacitor wiring and a portion of the pixel electrode; and

an input terminal portion formed along an end portion of the substrate and electrically connected to a first wiring,

wherein the input terminal portion comprises a first layer comprising the same material as the gate electrode and a second layer comprising the same material as the pixel electrode in contact with the first layer through a contact hole formed only in the first insulating layer, and

wherein a portion of the first wiring is formed over the second layer of said input terminal portion, and

~~wherein a side surface of the second layer of said input terminal portion is coplanar with a side surface of the first insulating layer.~~

33. (Currently Amended) A semiconductor device comprising:

- a substrate having an insulating surface;
- a thin film transistor formed over the substrate, the thin film transistor comprising:
 - a gate electrode formed over the substrate, the gate electrode comprising aluminum;
 - a first insulating layer, wherein a first portion of said first insulating layer is formed over said gate electrode;
 - a channel formation region formed in a first semiconductor layer;
 - source and drain regions, each of the source and drain regions comprising a second semiconductor layer including impurities of, formed over the first semiconductor layer;
 - a pixel electrode over the first insulating layer, the pixel electrode comprising indium, zinc and oxygen;
 - a second insulating layer comprising an inorganic material and overlapping with a first portion of the pixel electrode, the first semiconductor layer and the second semiconductor layer containing the impurities so as to be in contact with at least a part of the channel formation region;
 - a storage capacitor comprising a storage capacitor wiring comprising the same material as that of the gate electrode, a second portion of the first insulating layer over the storage capacitor wiring and a second portion of the pixel electrode; and
 - an input terminal portion formed along an end portion of the substrate and electrically connected to a first wiring,
 - wherein the input terminal portion comprises a first layer comprising the same material as the gate electrode[[,]] and a second layer comprising the same material as the pixel electrode,
 - wherein the first wiring is electrically connected to the second layer of said input terminal portion, and

wherein each of the gate electrode, the storage capacitor wiring and the first layer has a tapered portion, ~~and~~

~~wherein a side surface of the second layer of said input terminal portion is coplanar with a side surface of the first insulating layer.~~

34. (Currently Amended) A semiconductor device comprising:

a substrate having an insulating surface;

a thin film transistor formed over the substrate, the thin film transistor comprising:

a gate electrode formed over the substrate, the gate electrode comprising aluminum;

a first insulating layer, wherein a first portion of said first insulating layer is formed over said gate electrode;

a channel formation region formed in a first semiconductor layer;

source and drain regions, each of the source and drain regions comprising a second semiconductor layer including impurities, formed over the first semiconductor layer;

a second insulating layer comprising an inorganic material and formed over the first semiconductor layer and the second semiconductor layer containing the impurities so as to be in contact with at least a part of the channel formation region;

a pixel electrode formed in contact with the first insulating layer, the pixel electrode comprising indium, zinc and oxygen;

a storage capacitor comprising a storage capacitor wiring comprising the same material as that of the gate electrode, a second portion of the first insulating layer over the storage capacitor wiring and the pixel electrode; and

an input terminal portion formed along an end portion of the substrate and electrically

connected to a first wiring,

wherein the input terminal portion comprises a first layer comprising the same material as the gate electrode and a second layer comprising the same material as the pixel electrode in contact with the first layer through a contact hole formed only in the first insulating layer,

wherein a portion of the first wiring is formed over the second layer of said input terminal portion, and

wherein each of the gate electrode, the storage capacitor wiring and the first layer has a tapered portion, ~~and~~

~~wherein a side surface of the second layer of said input terminal portion is coplanar with a side surface of the first insulating layer.~~

35. (Previously presented) A semiconductor device according to claim 26, wherein the semiconductor device is selected from a group consisting of a personal computer, a video camera, a portable information terminal, a digital camera, a digital video disc player, an electronic play device and a television.

36. (Previously presented) A semiconductor device according to claim 27, wherein the semiconductor device is selected from a group consisting of a personal computer, a video camera, a portable information terminal, a digital camera, a digital video disc player, an electronic play device and a television.

37. (Previously presented) A semiconductor device according to claim 28, wherein the semiconductor device is selected from a group consisting of a personal computer, a video camera, a

portable information terminal, a digital camera, a digital video disc player, an electronic play device and a television.

38. (Previously presented) A semiconductor device according to claim 30, wherein the semiconductor device is selected from a group consisting of a personal computer, a video camera, a portable information terminal, a digital camera, a digital video disc player, an electronic play device and a television.

39. (Previously presented) A semiconductor device according to claim 31, wherein the semiconductor device is selected from a group consisting of a personal computer, a video camera, a portable information terminal, a digital camera, a digital video disc player, an electronic play device and a television.

40. (Previously presented) A semiconductor device according to claim 32, wherein the semiconductor device is selected from a group consisting of a personal computer, a video camera, a portable information terminal, a digital camera, a digital video disc player, an electronic play device and a television.

41. (Previously presented) A semiconductor device according to claim 33, wherein the semiconductor device is selected from a group consisting of a personal computer, a video camera, a portable information terminal, a digital camera, a digital video disc player, an electronic play device and a television.

42. (Previously presented) A semiconductor device according to claim 34, wherein the semiconductor device is selected from a group consisting of a personal computer, a video camera, a portable information terminal, a digital camera, a digital video disc player, an electronic play device and a television.

43. (Previously presented) A semiconductor device according to claim 26, wherein the source wiring is completely covered by the second insulating layer.

44. (Previously presented) A semiconductor device according to claim 27, wherein the first wiring is completely covered by the second insulating layer.

45. (Previously presented) A semiconductor device according to claim 28, wherein the first wiring is completely covered by the second insulating layer.

46. (Previously presented) A semiconductor device according to claim 30, wherein the first wiring is completely covered by the second insulating layer.

47. (Previously presented) A semiconductor device according to claim 31, wherein the source wiring is completely covered by the second insulating layer.

48. (Previously presented) A semiconductor device according to claim 32, wherein the first wiring is completely covered by the second insulating layer.

49. (Previously presented) A semiconductor device according to claim 33, wherein the first wiring is completely covered by the second insulating layer.

50. (Previously presented) A semiconductor device according to claim 34, wherein the first wiring is completely covered by the second insulating layer.

51. (New) A semiconductor device comprising:
a pixel portion over a substrate, the pixel portion comprising:
a semiconductor layer;
a gate electrode adjacent to the semiconductor layer with a gate insulating layer interposed therebetween;
a pixel electrode being electrically connected to the semiconductor layer, the pixel electrode comprising indium, zinc and oxygen;
an input terminal portion over the substrate, the input terminal portion comprising:
a metal layer; and
a transparent electrically conductive film formed over the metal layer and electrically connected to the metal layer, the transparent electrically conductive film comprising the same material as the pixel electrode.

52. (New) A semiconductor device comprising:

a pixel portion over a substrate, the pixel portion comprising:

a semiconductor layer;

a gate electrode adjacent to the semiconductor layer with a gate insulating layer

interposed therebetween;

a pixel electrode being electrically connected to the semiconductor layer, the pixel electrode comprising indium, zinc and oxygen;

an input terminal portion over the substrate, the input terminal portion comprising:

a conductive layer comprising aluminum; and

a transparent electrically conductive film formed over the conductive layer and electrically connected to the conductive layer, the transparent electrically conductive film comprising the same material as the pixel electrode.

53. (New) A semiconductor device according to claim 51, wherein the gate electrode comprises the same material as the metal layer of the input terminal portion.

54. (New) A semiconductor device according to claim 52, wherein the gate electrode comprises the same material as the conductive layer of the input terminal portion.

55. (New) A semiconductor device according to claim 51, wherein the gate insulating layer comprises a material selected from the group consisting of a silicon oxide, a silicon nitrogen oxide, a silicon nitride and a tantalum oxide.

56. (New) A semiconductor device according to claim 52, wherein the gate insulating layer comprises a material selected from the group consisting of a silicon oxide, a silicon nitrogen oxide, a silicon nitride and a tantalum oxide.

57. (New) A semiconductor device according to claim 51, wherein the metal layer comprises a first conductive layer, a second conductive layer and a third conductive layer.

58. (New) A semiconductor device according to claim 52, wherein the conductive layer comprises a first conductive layer, a second conductive layer and a third conductive layer.

59. (New) A semiconductor device according to claim 51, wherein the transparent electrically conductive film comprises $\text{In}_2\text{O}_3\text{-ZnO}$.

60. (New) A semiconductor device according to claim 52, wherein the transparent electrically conductive film comprises $\text{In}_2\text{O}_3\text{-ZnO}$.

61. (New) A semiconductor device according to claim 51, wherein the transparent electrically conductive film prevents the metal layer from corrosion.

62. (New) A semiconductor device according to claim 52, wherein the transparent electrically conductive film prevents the conductive layer from corrosion.

63. (New) A semiconductor device according to claim 51, wherein the semiconductor device is a liquid crystal display device.

64. (New) A semiconductor device according to claim 52, wherein the semiconductor device is a liquid crystal display device.

65. (New) An electronic device having a semiconductor device according to claim 51, wherein the electronic device is one selected from the group consisting of a personal computer, a digital camera, a video camera, a mobile computer, a portable telephone, an electronic document, a television, an electronic play device and a player using a recording medium.

66. (New) An electronic device having a semiconductor device according to claim 52, wherein the electronic device is one selected from the group consisting of a personal computer, a digital camera, a video camera, a mobile computer, a portable telephone, an electronic document, a television, an electronic play device and a player using a recording medium.